

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant :	John Rozen	Art Unit :	2153
Serial No. :	09/757,745	Examiner :	Yasin Barqadle
Filed :	January 10, 2001	Conf. No. :	8043
Title :	DISTRIBUTED SELECTION OF A CONTENT SERVER		

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

BRIEF ON APPEAL

**(1) Real Party in Interest**

The real party in interest is Clearway Technologies, LLC, a Delaware corporation having a place of business at 31 St. James Avenue, Suite 925, Boston, Massachusetts 02116 as evidenced by an assignment executed January 9, 2001 and recorded at the U.S. Patent Office on January 10, 2001, at Reel/Frame 011450/0846.

**(2) Related Appeals and Interferences**

Neither Appellant, nor Appellant's legal representative, nor the assignee are aware of any appeals or interferences that will directly affect or be affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

No claims are allowed. Claims 4, 7, and 9 have been cancelled. Claims 1-3, 5, 6, 8, and 10-14 are rejected and on appeal. Of these, claims 1, 6, and 10 are independent.

**(4) Status of Amendments**

An amendment to correct the dependency of claim 5 was filed under Rule 41.33(a). As of the filing of this appeal brief, the amendment has not been entered.

**(5) Summary of Claimed Subject Matter**

1. A method for directing a client (18) to a content server (16a) containing desired content, said method comprising:	FIG. 3
at an origin server (22) separate from the content server (16a), receiving a request from a client (18) for desired content;	FIG. 3, steps 32 and 34, page 6, lines 14-15
in response to the request, identifying an autonomous system having a plurality of content servers, each of the content servers having a copy of the desired content, and	page 6, lines 14-16
providing said client with a shared address, said shared address being common to said content servers; and	page 6, lines 16-17
serving said client from an optimal content server selected from said plurality of content servers, said optimal content server having been selected on the basis of an optimal path from said client to said shared address.	page 6, line 21- page 7, line 11, page 8, lines 10-14
6. A content delivery system comprising:	
an autonomous system (24) including a first content server (16a) and a second content server (16d) having content in common with said first content server;	FIG. 1, page 6, lines 7-8, page 5, lines 7-8, page 4, line 26-page 5, line 4
an origin server (22) separate from the autonomous system for providing an address to a client (18) in response to a request for content, the address identifying said autonomous system (24);	See FIG. 1, page 6, lines 14-20
a first router (20a) for relaying messages to said first content server (16a); and	page 4, lines 17-26. FIG. 1
a second router (20b) for relaying messages to said second content server (16d).	page 4, lines 170-26. FIG. 1

Claim 10 is a claim directed to a computer-readable medium having instructions for carrying out steps like those recited in claim 1. Accordingly, please refer to the table associated with claim 1.

**(6) Grounds of Rejection to be Reviewed on Appeal**

1. Independent claim 1 and its progeny, claims 2-3, as well as independent claim 6 and its progeny, claim 8, and independent claim 10, and its progeny claims 11-13, stand rejected as being anticipated under § 102(e) by *Hasebe*, et al., U.S. Patent 6,212,570.
2. Dependent claims 5, 8, and 14 stand rejected under §103 as being rendered obvious by the combination of *Hasebe* and *Stevens*.

**(7) Argument**

***Anticipation***

"It is well settled that anticipation under 35 U.S.C. §102 requires the presence in a single reference of all of the elements of a claimed invention." *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"This court has repeatedly stated that the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention." *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984), citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256, the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a particularly good seal when regulating a low pressure stream. The court quoted with approval from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later Judge Donald E. Lanc:

[T]he term "engaging the ball" recited in claims 7 and 8 means that the lip contacts the ball with sufficient force to provide a fluid tight seal \*\*\*\* The Saunders flange or lip only sealingly engages the ball 1 on the upstream side when the fluid pressure forces the lip against the ball and never sealingly engages the ball on the downstream side because there is no fluid pressure there to force the lip against the ball. The Saunders sealing ring provides a compression type of seal which depends upon the ball pressing into the material of the ring. \*\*\* The seal of Saunders depends primarily on the contact between the ball and the body of the sealing ring, and the flange or lip sealingly contacts the ball on the upstream side when the fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and comparing the disclosure of the reference with the claims of the patent in suit. A claimed device is anticipated if a single prior art reference discloses all the elements of the claimed invention as arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof*, 227 U.S.P.Q. 982, 985 (U.S. ITC 1985).

### ***Obviousness***

"It is well established that the burden is on the PTO to establish a prima facie showing of obviousness, *In re Frisch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (C.C.P.A., 1972)."

"It is well established that there must be some logical reason apparent from the evidence or record to justify combination or modification of references. *In re Regal*, 526 F.2d 1399 188, U.S.P.Q.2d 136 (C.C.P.A. 1975). In addition, even if all of the elements of claims are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill in the art would have been prompted to combine the teachings of the references to arrive at the claimed invention. *Id.* Even if the cited references show the various elements suggested by the Examiner in order to

support a conclusion that it would have been obvious to combine the cited references, the references must either expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why one skilled in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex Parte Clapp*, 227 U.S.P.Q.2d 972, 973 (Board. Pat. App. & Inf. 985)."

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

## SECTION 102 REJECTION OF CLAIM 1 AND PROGENY

In the very first Office Action<sup>1</sup>, the Office cited *Hasebe* as anticipating claim 1. In particular, the Office asserted that *Hasebe*'s local unit 200 corresponded to an origin server.

In response, Appellant then amended claim 1. Following this amendment, the Office withdrew the section 102 rejection based on *Hasebe*.

Two years and several office actions later, the Office has come full circle by making another section 102 rejection based on *Hasebe*. Only this time, the Office no longer states that *Hasebe*'s local unit 200 is an origin server. Instead, the Office now asserts that either communication network is an origin server, or that *Hasebe*'s network exchange device is an origin server.

Consistent with the original citation of *Hasebe* in the first Office Action, the present Office Action states:

- Serving said client from an optimal content server selected from said plurality of content servers:  
“one information distribution device 60 is selected from a plurality of these information distribution devices 60 that are present, by the user terminal device 10”  
- U.S. Patent No. 6,212,570, col. 7, lines 34-36.

Based on the foregoing passage, it is clear that

1. The Office continues to regard *Hasebe*'s terminal device 10 as being the claimed “client”; and
2. The Office continues to regard *Hasebe*'s information distribution devices 60 as the claimed “content servers.”

However, nowhere does *Hasebe* teach any entity that is both

- (1) separate from the information distribution devices 60 and that
- (2) receives requests for desired content from the terminal devices 10.

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<sup>1</sup> Office Action, March 1, 2004.

It is unclear, therefore, where *Hasebe* teaches an "origin server" that is "separate from the content servers" and that also receives "a request from a client for desired content" as required by claim 1.

***Hasebe fails to disclose an "origin server"***

In connection with the claimed "origin server," the Office Action states:

In referring to claims 1, 10, and 13, *Hasebe* shows substantial features of the claimed invention, including:

• At an origin server separate from the content server, receiving a request from a client for desired content (col. 6, lines 17-27 and col. 9, lines 38 to col. 10, line 25)

Thus, according to the Office Action, the claimed "origin server" is disclosed at

1. col. 6, lines 17-27 (hereafter "passage A") and at
2. col. 9, line 38-col. 10, line 25 (hereafter "passage B").

In an effort to understand exactly what the Office regards as an "origin server," we consider these passages in some detail:

Passage A reads as follows:

*"More specifically, in this information distribution device selection system of the present invention, when there are at least two or more information distribution devices 60 on interconnected communication networks, a request is received from a user terminal device 10 or an information distribution relay device (not shown) for making a request to the information distribution device 60 on behalf of the user terminal device 10, and a logically closest one among the information distribution devices 60 is selected without making a user conscious."*

The only two hardware elements discussed in passage "A" are: (1) a terminal device 10; and (2) information distribution devices 60. Therefore, if passage "A" were to teach an origin server, that origin server would have to be either a terminal device 10 or an information distribution device 60. However, for reasons set forth below, neither the terminal device 10 nor the information distribution devices 60 can correspond to the "origin server."

First, with regard to the terminal device 10, we know that when *Hasebe* was first cited two years ago, the Office asserted that the terminal device 10 corresponded to the claimed "client." In both the final Action and its predecessor, the Office stated again that the terminal device 10 corresponds to the claimed "client." Thus, the Office has consistently maintained, over three different Actions, that the terminal device 10 corresponds not to the origin server but to the *client*.

Next, with regard to the information distribution devices 60, we know that when *Hasebe* was first cited two years ago, the Office asserted that the information distribution devices 60 played the role of the claimed "content servers." The Office has reinforced this position in the two most recent actions. Thus, the Office has already made it abundantly clear that an information distribution device 60 corresponds to the claimed "content server," and not to the "origin server."

There are no other hardware elements discussed in passage A that could correspond to the claimed origin server. Therefore, by elimination, it is clear that passage A cannot possibly teach the claimed "origin server."

We next turn to the much lengthier passage B, which reads as follows:

*"In addition, the routing information is exchanged with the connected communication network exchange devices (step S19), and when a new routing information table is received, the routing information is updated accordingly (step S20) in the routing information table 190.*

*In the following, the coordinated operations of the respective communication network exchange devices 40 will be described again.*

*In order to offer a plurality of choices by providing the information distribution devices 60A, 60B and 60C within this system, these information distribution devices 60A, 60B and 60C are connected to the information distribution service communication networks 50A, 50B and 50C within the service providing communication network provider. To these communication networks 50A, 50B and 50C, the same communication network identifier (called identical communication network identifier: which is 192.0.0.0 here) and different communication network identifiers (called individual communication network identifier: which are 192.0.10.0, 192.0.11.0 and 192.0.12.0 here) are assigned, and to the information distribution devices 60A, 60B and 60C, the same communication terminal identifier (called identical communication terminal identifier: which is 192.0.0.1 here) and different communication terminal identifiers (called individual communication terminal identifiers: which are 192.0.10.1, 192.0.11.1 and 192.0.12.1 here) are assigned. The communication networks 50A, 50B and 50C are connected to the communication network exchange devices 20A, 20B and 20C respectively via the communication network*



*exchange devices 40A, 40B and 40C and the inter-connected communication networks. The user terminal devices 10A, 10B and 10C are connected to the respective communication networks which are connected to the communication network exchange devices 20A, 20B and 20C.*

*In the case where the information distribution devices 60A, 60B and 60C are operating normally, the communication network exchange devices 40A, 40B and 40C that correspond to the respective information distribution devices 60A, 60B and 60C transmit the routing information of the corresponding information distribution service communication network and individual communication network to the neighboring communication network exchange devices.*

*If any one or all of the information distribution devices 60A, 60B and 60C are not operating normally, the communication network exchange devices 40A, 40B and 40C that correspond to the respective information distribution devices 60A, 60B and 60C stop the transmission of the routing information of the corresponding information distribution service communication network and individual communication network that has been transmitted to the neighboring communication network exchange devices.*

*The communication network exchange devices 40A, 40B and 40C receive the routing information containing a communication network identifier, a communication rate, a transmission delay, the number of communication network exchange devices present on a communication route, and a policy that is transmitted from the neighboring communication network exchange devices, determines a route to the communication network to be connected from these information, and registers it into the routing information table."*

The foregoing passage discusses information distribution devices 60. As already discussed in connection with passage "A," the Office has been unequivocal in its assertion that the an information distribution device 60 corresponds to a "content server," and not to an "origin server."

However, this is not the end of the inquiry. Passage "B" also discusses additional hardware elements, namely:

- (1) communication networks 50A-C,
- (2) network exchange devices 20A-C; and
- (3) additional network exchange devices 40A-C.

It is therefore useful to consider whether any one of these might reasonably be regarded as an "origin server" consistent with the limitations recited in claim 1

**1. Is a communication network 50A-C an “origin server”?**

The communication networks **50A-C** are simply networks used in communication. A server is plainly not a network. There is no reasonable basis for suggesting that any of these communication networks **50A-C** is an “origin server.”

**2. Is the network exchange device 40 an “origin server”?**

According to *Hasebe*, a network exchange device **40** is “an element for controlling a route at a time of transmitting the information.”<sup>2</sup> Thus, the stated function of a network exchange device **40** is inconsistent with the function of an “origin server.” Clearly, if two elements carry out different functions, they cannot be regarded as the same. Therefore, the network exchange device **40** cannot possibly be regarded as the “origin server.”

**3. Is a network exchange device 20A-C an “origin servers”?**

*Hasebe* does not discuss the devices **20A-C** in detail. However, since they too are named “network exchange devices,” it seems reasonable to suppose that they function like the network exchange devices **40A-C**. Hence, like the network exchange devices **40A-C** discussed above, there is no apparent basis for considering any of these devices to be an “origin server.”

It is apparent therefore that neither the network exchange devices **20A-C**, **40** nor the communication network **50A-C** can reasonably be construed as an “origin server.” There are no other hardware elements described in passage “B” that could reasonably correspond to the claimed “origin server.” Therefore, passage “B,” like passage “A,” fails to teach the claimed “origin server.”

***Hasebe* fails to disclose autonomous system**

Claim 1 recites “an autonomous system having a plurality of content servers.”

In connection with the autonomous system, the final Office Action cites:

- **Identifying an autonomous system having a plurality of content servers:**  
*“Then, the routing control function can be realized either only within the routing control autonomous system 30 (which indicates own communication network range at a time of*

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<sup>2</sup> *Hasebe*, col. 7, lines 58-60.

*exchanging routing information using external routing control, means among communication network providers), or as a combination of a plurality of routing control autonomous system 30." (Hasebe, col. 7, line 65 - col. 8, line 4)*

The cited passage (hereafter "passage C") reads as follows:

*"Then, the routing control function can be realized either only within the routing control autonomous system 30 (which indicates own communication network range at a time of exchanging routing information using external routing control means among communication network providers), or as a combination of a plurality of routing control autonomous system 30. It is preferable to select this according to a size of the information distribution service communication network 30 to be connected to the inter-connected communication networks."*

Apparently, the Office regards the "routing control autonomous system 30" disclosed in passage "C" as corresponding to claim 1's "autonomous system."

In its first citation of *Hasebe* some years ago, the Office regarded the information distribution devices 60A-C as corresponding to the claimed "content servers." In the preceding two actions, the Office has re-iterated this position. Therefore, before the routing control autonomous system 30 can meet the claim limitation of "an autonomous system having a plurality of content servers," it would somehow have to "have" two or more information distribution devices 60A-C.

Inspection of FIG. 8 reveals that the information distribution devices 60A-C are *not* constituent elements of the routing control autonomous system 30. Accordingly, it is clear that the routing control autonomous system 30 cannot possibly meet claim 1's limitation of "an autonomous system *having a plurality of content servers.*"

#### ***Hasebe* fails to teach all claim limitations**

It is quite clear that *Hasebe* fails to disclose at least two of the limitations in claim 1.

Since a proper section 102 rejection requires that each and every claim limitation be disclosed, it follows that the section 102 rejection based on *Hasebe* continues to be improper. Accordingly, Appellant requests that the rejection be reversed.

Claims 2, 3, and 5 all depend on claim 1 and are allowable for at least the same reasons.

## SECTION 102 REJECTION OF CLAIMS 6, 10 AND PROGENY

Claim 10 has limitations similar to those of claim 1, and is allowable for at least the same reasons. Claims 11-14 all depend on claim 10 and are allowable for at least the same reasons as claim 10.

Claim 6 recites both the origin server and the autonomous system that includes at least two content servers. For reasons discussed in connection with claim 1, *Hasebe* fails to disclose both of these claim limitations.

Claim 8 depends on claim 6 and is allowable for at least the same reasons as claim 6.

## SECTION 102 REJECTION OF CLAIM 2

Claim 2 requires that serving a client from an optimal content server include "identifying an optimal path between [a] client and [a] shared address" where the shared address is associated with a content server.

The Office Action states that this is disclosed by the following passage:

By the above mechanism for automatic registration of the routing information table, it is possible to realize the selection of a route to the logically closest information distribution device 60 among a group of the information distribution devices 60 which are currently capable of responding to a request destined to the information distribution service communication terminal identifier.<sup>3</sup>

The automatic registration referred to in the foregoing passage arises, for example, when an information distribution device 60 stops working.<sup>4</sup> When this occurs, the entry for that information distribution device 60 is deleted from the routing table of its associated communication network exchange device 40.

However, this does not amount to identifying an optimal path between a client and a shared address associated with a content server. At best, *Hasebe* teaches deleting that content server from a routing table, thereby ensuring that that content server never receives messages.

<sup>3</sup> *Hasebe*, column 8, line 65 to column 9, line 4.

<sup>4</sup> *Hasebe*, column 8, lines 46-64.

Moreover, the claim requires identifying the optimal path between the client and the *shared address*. The "shared address" is presumably the identical communication network ID *192.0.0.1* shown in FIG. 8. But the three information distribution devices **60A-C** all share the same shared address. So if one were to delete the entry for any one of those devices, the path from the client to the shared address itself would remain the same.

By way of analogy, one might obtain the optimal route from a client's office to a law firm. All the lawyers at that firm share the same address. It is possible that one of those lawyers is unavailable for consultation. But this does not change the optimal path to the law firm itself.

In the present case, there exists an optimal path from the "client" **10A** to the shared address *192.0.0.1*, which is an address shared by the three information distribution devices **60A-C**. Suppose this optimal path extended from the client to router A, then on to router B, and then finally to address *192.0.0.1*. If one information distribution device **60A** were broken, there would be no reason to believe the optimal path to *192.0.0.1* would no longer go from router A to router B. The optimal path from the client to a shared address is what it is, *regardless* of the condition of the individual information distribution devices **60A-C** that happen to share that address.

Claim 11 includes limitations similar to claim 2 and is patentable for at least the same reasons.

Claims 3 and 12 depend on claims 2 and 11 respectively and are patentable for at least the same reasons.

#### **SECTION 103 REJECTION OF CLAIM 5, 8 AND 14**

Claim 5 recites the additional limitation of providing a shared address to a BGP router. Claims 8 and 14 recite similar limitations.

*Stevens* teaches that BGP routers were known in the art. The Office proposes that one of ordinary skill in the art would have found it obvious to somehow incorporate a BGP router into the *Hasebe* system

“in order to implement the content servers as autonomous systems, as desired by the system of *Hasebe*.”

However, as the Office has pointed out in connection with rejecting claim 1, *Hasebe* already discloses an autonomous system. Thus, one of ordinary skill in the art would have recognized that there would be no reason “to implement the content servers as autonomous systems” in *Hasebe* because *Hasebe* already has an autonomous system.

In addition, as noted above, the Office states that an autonomous system is somehow “desired by the system of *Hasebe*.” This suggests that *Hasebe* somehow teaches the desirability of the proposed combination. However, the Office has not provided any evidence showing what the system of *Hasebe* “desires.”

In addition, the Office states that *Hasebe* already teaches an autonomous system. Thus, one of ordinary skill in the art would have found that since the *Hasebe* system already has an autonomous system, there would be no reason for it to “desire” an autonomous system.

Thus, the proposed reason to modify *Hasebe* to include a BGP router as described by *Stevens* appears contrived in hindsight to reconstruct the claimed invention. Accordingly, the section 103 rejection of claims 5, 8, and 13 is improper.

#### **Summary**

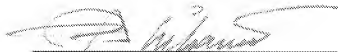
Please apply the \$250 brief fee and any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 09651-014001.

Applicant : John Rozen  
Serial No. : 09/757,745  
Filed : January 10, 2001  
Page : 15 of 20

Attorney's Docket No.: 11125-017001

Respectfully submitted,

Date: March 23, 2007



Faustino A. Lichauro  
Reg. No. 41,942

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906

1. A method for directing a client to a content server containing desired content, said method comprising:  
  
at an origin server separate from the content server, receiving a request from a client for desired content;  
  
in response to the request,  
  
identifying an autonomous system having a plurality of content servers, each of the content servers having a copy of the desired content, and  
  
providing said client with a shared address, said shared address being common to said content servers; and  
  
serving said client from an optimal content server selected from said plurality of content servers, said optimal content server having been selected on the basis of an optimal path from said client to said shared address.
2. The method of claim 1 wherein serving said client from an optimal content server comprises:  
  
receiving a request from said client to connect to a content server at said shared address;  
  
identifying an optimal path between said client and said shared address; and  
  
designating a content-server on said optimal path to be said optimal content-server
3. The method of claim 2 further comprising directing said client to reach said optimal content-server by following said optimal path.
5. The method of claim 5 further comprising providing said shared address to a BGP router.
6. A content delivery system comprising:  
  
an autonomous system including a first content server and a second content server



having content in common with said first content server;

an origin server separate from the autonomous system for providing an address to a client in response to a request for content, the address identifying said autonomous system;

a first router for relaying messages to said first content server; and

a second router for relaying messages to said second content server.

8. The content delivery system of claim 6 wherein said first router is a BGP router.
10. A computer-readable medium having encoded thereon software for directing a client to a content server containing desired content, said software comprising instructions for:
  - at an origin server separate from the content server, receiving a request from a client for desired content;
  - in response to the request,
    - identifying an autonomous system having a plurality of content servers, each of the content servers having a copy of the desired content, and
    - providing said client with a shared address, said shared address being common to said content servers; and
  - serving said client from an optimal content server selected from said plurality of content servers, said optimal content server having been selected on the basis of an optimal path from said client to said shared address.
11. The computer-readable medium of claim 10 wherein said instructions for serving said client from an optimal content server comprise instructions for:
  - receiving a request from said client to connect to a content server at said shared address;

identifying an optimal path between said client and said shared address; and

designating a content-server on said optimal path to be said optimal content-server

12. The computer-readable medium of claim 11 wherein said software further comprises instructions for directing said client to reach said optimal content-server by following said optimal path.
13. The computer-readable medium of claim 10 said software further comprises instructions for grouping said plurality of content servers into an autonomous system.
14. The computer-readable medium of claim 13 said software further comprises instructions for said shared address to a BGP router.

Applicant : John Rozen  
Serial No. : 09/757,745  
Filed : January 10, 2001  
Page : 19 of 20

Attorney's Docket No.: 11125-017001

### **Evidence Appendix**

None.

Applicant : John Rozen  
Serial No. : 09/757,745  
Filed : January 10, 2001  
Page : 20 of 20

Attorney's Docket No.: 11125-017001

### **Related Proceedings Appendix**

None.